

TO WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, ROMAN D. VERSCH, a citizen  
of the United States of America, residing in Glendora,  
5 in the County of Los Angeles, State of California, have  
invented a new and useful improvement in

10 SELECTED CLIMATE CHANGE CONTROL OF PET FOOD  
FORMULATION AND DISTRIBUTION

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## BACKGROUND OF THE INVENTION

5 This invention relates generally to methods of formulation and distribution of pet food to optimize nutrition of pets; more particularly, it concerns modification of ingredient formulation of pet foods, on a seasonal basis, as related to distribution destination, and under different climate conditions.

10 Multiple ingredients are currently included in pet food distributed in containers. The ingredient formulations are established company-by-company, as applicable throughout the United States, and throughout the year.

15 There is need for a way to enhance pet food nutrient effectiveness, under different weather conditions, considering that at any locality, weather and temperature will change, on a seasonal basis.

20 It becomes impractical and highly inconvenient (measuring, weighing and calculating) for the pet owner to change pet food formulation on a day-to-day, or week-to-week basis, as weather changes, considering that a large number (typically over 20) of ingredients are included in a typical formulation, and a weight percent balance of ingredients is required.

There is need for a simple, effective pet food supply process, to overcome these problems and difficulties. In this regard, there is need for efficient variance in pet food supply, to maintain optimum metabolic function in companion animals, at varying climate conditions.

#### SUMMARY OF THE INVENTION

It is a major object of the invention to provide a simple and effective pet food supply process that meets the above need for weather related pet food. Basically, the invention provides a method of selectively climate controlling the formulation and distribution to points of sale to customers of pet food, that includes the steps

a) establishing a basic formulation of pet food blended ingredients containing A and B ingredients in addition to C ingredients, where

A ingredients are animal based protein, or fat source,

B ingredients are plant based carbohydrate, protein source

C ingredients are vitamin mineral  
supplements, cultures

b) distributing said A, B and C blended  
formulation of ingredients to said points of sale,

5 c) relatively increasing or adjusting  
selected amounts of said A ingredient or ingredients  
from initial or nominal levels to relatively higher  
levels for distribution in said basic formulation to  
selected points of sale subjected to relatively cool  
10 climate conditions, to enhance pet nutrition in such  
cooler conditions,

d) and relatively decreasing or adjusting  
selected amounts of said B ingredient or ingredients  
from initial or nominal levels to lower levels for  
15 distribution in said basic formulation to selected  
points of sale subject to relatively warm climate  
conditions, to enhance pet nutrition in such warmer  
conditions,

e) wherein said c) and d) steps occur at  
20 different times of the year.

In this regard, most of the basic formulation,  
without change of ingredients, is shipped to all  
climates during spring and fall, whereby the A' changed  
formulation ingredients for winter takes into

consideration both a cooler climate due to the area of the country (North) and the winter season; and the B' changed formulation ingredients for summer takes into consideration both warmer climate due both to area of the country (South) and the summer season.

It is another object of the invention to include returning said selected amounts of said A' ingredients to said initial A levels thereof in said basic formulation after said cool climate conditions diminish; and returning said selected amounts of said B' ingredients to said B initial levels thereof, in said basic formulation after said warmer climate conditions diminish.

It is another object of the invention to provide a method as referred to wherein said b) distributing step occurs at selected intervals during summer, fall, winter and spring seasons, said c) step typically occurs during a transition period in the fall season, and said d) step typically occurs during a transition period in the spring season.

An added object is to provide a method as referred to wherein the ingredients in the formulation subject to the c) step are distributed in containers bearing a first distinctive appearance, and the

ingredients in said formulation subject to said d) step  
are distributed in containers bearing a second  
distinctive appearance. For example, the first and  
second distinctive appearances may include different  
climate related colors.

Yet another object of the invention includes  
the step of varying such selected amounts of said A and  
B ingredients in accordance with expected indoor and  
outdoor varied climate conditions.

An additional object includes reducing  
distribution of said basic formulation of ingredients  
(i.e. without A') as said step c) is effected; and  
reducing distribution of said basic formulation of  
ingredients (i.e. without B') as said step d) is  
effected.

A further object includes effecting said step  
c) during a seasonal transition period associated with  
the fall season; and effecting said step d) during a  
seasonal transition period associated with the spring  
season.

A yet additional object indicates the step of  
formulating a primary proprietary additive, and adding  
that proprietary additive to the basic formulation of  
pet food ingredients in conjunction with said c) step,

said primary additive characterized as enhancing the effect of said c) step; and/or formulating a secondary proprietary additive, and adding said proprietary additive to the basic formulation of pet food ingredients in conjunction with said d) step, said secondary additive characterized as enhancing the effect of said d) step.

These and other objects and advantages of the invention, as well as the details of an illustrative embodiment, will be more fully understood from the following specification and drawings, in which:

#### DRAWING DESCRIPTION

Fig. 1 is a graph showing seasonal changes in shipments of winter and summer blend formulations;

Fig. 2 is a representation of containers or bags for winter and summer blend pet food formulations;

Fig. 3 is a graph showing changes in pet food formulations during a first transition period; and

Fig. 4 is a graph showing changes in pet food formulation during a second transition period.

Figs. 5 and 6 are ingredient listings for winter and summer seasons.

Figs. 7 and 8 are nutrient listings, for the  
respective Fig. 5 and Fig. 6 ingredient listings.

#### DETAILED DESCRIPTION

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In accordance with the preferred business  
method of the invention, a basic formulation of pet food  
blended ingredients is established, for supplying the  
desired nutrients to the pet. Such ingredients may be  
designated as A and B ingredients, subject to seasonal  
relative weight percent variation as will appear, and in  
addition to remaining C ingredients which do not vary,  
relative to one another, in weight percent.

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As one example, see the following listing of  
one typical formulation for dog food, containing 42  
ingredients. Selected A ingredients, for example are  
numbered 1, 4, 6 and 8, and selected B ingredients are  
numbered 2, 3, 5 and 7. The remaining ingredients may  
be considered C ingredients. The listed A ingredients  
are subject to selection and may be the same as or  
somewhat different from B ingredients, and the listed B  
ingredients are also subject to selection, and may be  
the same as or somewhat different from A ingredients.  
Thus, A ingredients may include or consist of certain of



the B ingredients, and vice versa. Predominant A ingredients (increase in winter) in weight percent, are chicken meal, brown rice and oats; and predominant B ingredients (decrease in summer) in weight percent, are chicken meal, brown rice, oats and Brewer's rice. See tables in Figs. 5 & 6.

#### EXAMPLE OF FORMULATION

- 10            1. Poultry meal up in winter, down in summer
2. Brown rice up in winter, down in summer
3. Oat meal up in winter, down in summer
4. Lamb meal up in winter, down in summer
5. Ground (Brewer's) rice up in summer, down in
- 15            winter
6. Chicken fat (preserved with mixed tocopherols
- and ascorbic acid) up in winter, down in summer
7. Dehydrated alfalfa meal
8. Fish meal
- 20            9. Flax seed
10. Natural flavors
11. Sunflower
13. Brewers dried yeast
14. Monosodium phosphate

- 15. Choline chloride
- 16. Rosemary extract
- 17. Sage extract
- 18. Ferrous sulfate
- 5 19. DL-Alpha tocopherols acetate (source of Vitamin E)
- 20. Zinc oxide
- 21. Sodium selenite
- 22. Manganous oxide
- 10 23. Riboflavin supplement (source of Vitamin B Complex)
- 24. Copper sulfate
- 25. Zinc methionine
- 26. Iron proteinate
- 15 27. Manganese proteinate
- 28. Copper proteinate
- 29. Niacin
- 30. Vitamin B12 supplement
- 31. Vitamin A supplement
- 20 32. Calcium pantothenate
- 33. D-Biotine supplement
- 34. Pyridoxine hydrochloride (Vitamin B6)
- 35. Calcium iodate
- 36. Thiamine mononitrate

- 37. Folic acid
- 38. Vitamin D3 supplement
- 39. Yucca schidigera extract
- 40. Papain
- 5 41. Dried bacillus subtilis fermentation product
- 42. Dried aspergillus fermentation product
- 43. Dried egg

Typical A ingredients are Nos.1, 4 6 & 8;  
and typical B ingredients are Nos.2, 3, 5 & 7.

10 Items 13-43 may typically be regarded as a  
vitamin and mineral set or group listing, to in whole or  
in part or in part meet APCO standards.

In accordance with the invention, the  
following steps are carried out:

- 15 a) establishing a basic formulation of pet  
food blended ingredients containing A and B ingredients  
in addition to C ingredients,
- b) distributing the A, B and C blended  
20 formulation of ingredients to selected points of sale to  
customers,
- b) increasing or adjusting selected amounts  
of the A ingredients from initial levels to higher  
levels A' for distribution in said basic formulation to  
selected points of sale subjected to relatively cool

climate conditions, to enhance pet nutrition in such cooler conditions,

5           d) and decreasing or adjusting selected amounts of said B ingredients from initial levels to lower levels B' for distribution in the basic formulation to selected points of sale subject to relatively warm climate conditions, to enhance pet nutrition in such warmer conditions.

10           The "cool climate" formulation A' + B + C is shipped to cooler climates during parts of October and November, all of December through April and parts of May and June; and the warm climate formulation A + B' + C is shipped to warmer climates during parts of April and May, all of June - September, and part of October and  
15           November.

20           Referring to Fig. 1, step b) above occurs during the whole year as diagrammed; however, during the period designated c) the formulation shipped to points of sale to users, in cooler climates, contains increased amounts of the A ingredients, as to A' levels shown by the higher status in the Fig. 5 numbered sequence of ingredients (see for example No.1-3 in Fig. 5); and during the period designated d) the formulation shipped to points of sale to users, in warmer climates, contains

lesser or decreased amounts of the B ingredients, as to B' levels, shown by the lower status in the Figure 6 numbered sequence of ingredients (see for example Nos.1-3 in Fig. 6).

5                   The purpose of such selective formulation, and shipments to different climates, is to enhance pet nutrition in such cooler and warmer climates. Note that steps a) and d) occur at different times of the year.

10                   The following formula timing is related to the earth's position in orbit around the sun, cause and affect of Seasons.

Northern Hemisphere

January - Cool weather Blend

February - Cool Weather Blend

15                   Book Distributors for Summer Blend. Notify Retailers of upcoming conversion in April.

March - Cool Weather Blend. March 21, Vernal Equinox  
(time to convert formulas)

20                   Ship Distributors last two weeks of March Summer Blend.

April - Transition to Summer Blend. If consumers have any Cool Weather Blend left, continue to feed until gone, or mix with Summer Blend.

May - Transition to Summer Blend. Consumer may

finish out any remaining product Cool  
Weather Blend on hand as peak summer season  
has not yet arrived.

June - Summer Blend. June 21, Summer Solstice

5 July - Summer Blend

August - Summer Blend

Book Cool Weather Blend with Distributors.  
Notify retailers of upcoming conversion in  
October.

10 September - Summer Blend. September 23 Autumnal Equinox  
(time to convert formula).

Ship Distributors last two weeks of  
September Cool Weather Blend.

15 October - Transition to Cool Weather Blend. If  
consumers have any Summer Blend left,  
continue to feed until gone, or mix with  
Cool Weather Blend formula.

November - Transition to Cool Weather Blend. Consumer  
may finish out any remaining product  
20 Summer Blend on hand as peak winter season  
has not yet arrive.

December - Cool Weather Blend. December 22, Winter  
Solstice.

Transition periods are indicated at 20 and 21 in Fig. 1, and also in Figs. 3 and 4. During transition period 20, in Fig. 3, the % of bags or containers shipped with A' + B + C ingredients (A' being the increased level of A ingredients as seen in Fig. 5 for example) increases from 0 to 100%, whereas the % of bags shipped with A + B' + C ingredients (B' being the lowered level of B ingredients as seen in Fig. 6 for example) decreases from 100% to 0, as between October and November for example.

During transition period 21 seen in Fig. 4, the % of bags or containers shipped with A' + B + C ingredients decreases from 100% to 0, whereas the % of bags shipped with A + B' + C ingredients increases from 0 to 100%, as between March and April, for example.

Transition lines 30, 31, 32 and 33 have terminations indicated at 30a, 30b, 31a, 31b, 32a, 32b and 33a and 33b. The positions of such terminations may be adjusted, i.e. advanced or retarded (see bands 86-87) in accordance with predicted short term seasonal changes, as for example extended seasonal temperature changes.

Fig. 1 also shows the booking interval 22 in August and September, for A' + B + C formulation

shipments for winter climates; and the booking interval  
22' in February and March for A + B' + C formulation  
shipments, for summer climates.

Note distribution slowing at 30 and 31; and  
distribution increasing at 32 and 33, in Figs. 3 and 4.

Fig. 2 shows a distribution container 26 for  
the A' + B + C (winter climate) formulation; and a  
distribution container 27 for the A + B' + C (summer  
climate) formulation. Container 26 may have a first  
color, and container 27 a second color. Other  
distinctive appearances may be provided.

The invention also contemplates varying said  
selected amounts of said A and/or B ingredients in  
accordance with expected indoor and outdoor cool climate  
temperature conditions; and varying said selected  
amounts of said B and/or B ingredients in accordance  
with expected indoor and outdoor warm climate  
conditions.

The invention also contemplates providing a  
primary proprietary additive and adding said proprietary  
additive to the basic formulation of pet food  
ingredients in conjunction with said c) step, said  
primary additive characterized as enhancing the  
nutritional benefit and effect of said c) step; as well



as providing a secondary proprietary additive, and  
adding said proprietary additive to the basic  
formulation of pet food ingredients in conjunction with  
said d) step, said secondary additive characterized as  
enhancing the nutritional benefit and effect of said d)  
step.

The pet food formulation and distribution are  
of unique advantage as respects altered formulations to  
meet specific nutritional requirements of companion  
animals, as they are affected by changing climatic  
conditions. In this regard, the inventor's research  
shows that cooler weather, caused by the earth's  
position relative to the sun, increases a pet's  
requirements of nutrients, proteins and fats. Warmer  
weather, again caused by the earth's position relative  
to the sun, decreases a pet's requirements of the same  
ingredients in order to maintain healthy metabolic  
function. It is also determined by such research that  
the length of daylight affects the bi-annual shedding of  
a pet's coat in preparation of the changing seasons.  
Formulas disclosed herein are designed to provide the  
proper mixture of ingredients to produce the best coat  
for the upcoming season, while not stressing the body  
with too much or not enough of certain other

ingredients; again determined by the pet's changing metabolic needs, as caused by different climate conditions.

5 During cooler climate continuance, (November through May), the northern hemisphere cooler climate pet food product A'+ B + C is distributed.

10 Since the southern hemisphere has the opposite season, the summer blend pet food product A + B' + C is shipped to that region. During the warmer climate season of the northern hemisphere, the summer blend product is shipped, and the southern hemisphere receives the cooler weather blend.

15 The base formula or formulas consist or consists of high quality ingredients approved by AAFCO for pet food use. The amount of the same ingredients will change to meet specific protein and fat analysis for the appropriate season. For example, pet food ingredients are required to list in order of total amount contained in a formula. The position of an  
20 ingredient will move for example from second to fourth, for the opposite season, and return to the second for the previous season, keeping the base formulation similar so as not to upset a pet's digestive tract, yet still meet higher and lower protein and fat objectives.

To this base formula that is adjusted for the season, a certain percent of a selected proprietary blend can be added to enhance the efficacy of the formula. These proprietary formulas may also be sold as under license to distributors of other brands of pet food. Such additives may be packaged and sold separately as on retailer shelves for consumers to add to their current brand of pet food after the introduction of the kibble and canned diets. In the second year, additional formulas for indoor cool weather, outdoor cool weather, indoor summer blend, outdoor summer blend may be introduced to refine nutritional requirements of pets in those specific conditions.

The distribution method of doing business can be directly correlated to the changing seasons. Retailers sales can tracked to slow distribution of current formula at end of season, to allow retailers to sell down current seasonal product, as the upcoming formula comes into the warehouse. Such months are 'transitional' allowing depleting of past season formula and introduction of new seasonal formula. The transition period is set for two months between formula change, October/November and May/June. Any extra

formula from the previous season can be held over (by the distributor) for the next change, as the formulas may have a one year shelf life.